Fact Sheet

US Army Engineer
Research and Development Center
Waterways Experiment Station

March 1999

Public Affairs Office Ž 3909 Halls Ferry Road Ž Vicksburg, MS 39180-6199 Ž (601) 634-2504 Ž http://www.wes.army.mil

Roller Compacted Concrete (RCC) Pavement

Purpose: Design and evaluation of RCC pavement.

Background: RCC is a very stiff (zero slump) Portland cement concrete that is placed and compacted with asphalt concrete type paving equipment. RCC is normally mixed in continuous pug-mill mixers. The RCC is then hauled to the paving site in non-agitated trucks, placed with pavers, and compacted with vibratory and pneumatic-tire rollers. RCC forms a strong and durable concrete pavement that is more economical to place than using conventional Portland cement placement methods. The Airfields and Pavements Division (APD) of the Geotechnical Laboratory at the U.S. Army Engineer Waterways Experiment Station (WES) has had a great deal of experience with RCC pavements. WES has developed and evaluated various mixtures and mixture proportions of materials for RCC mixtures. Field performance evaluation of RCC pavements has been conducted for many years by WES. These evaluations have been conducted on a wide range of RCC pavement applications in many locations throughout the world.

Placing and Compacting RCC

Facts: The WES has been directly involved in various aspects of research with RCC for over 20 years. The APD has constructed several test sections with RCC pavement investigating mixture design, construction methods, compaction requirements, construction and post construction evaluation methods, joint spacing, curing, and field performance. WES has developed guide specifications and other technical manuals concerning RCC pavement for use by the military. WES has the capability for RCC mixture design development as well as providing technical assistance for all phases of field construction.

Point of Contact: Contact Mr. James E. Shoenberger for more information regarding RCC Pavement, at (601) 634-3553 or e-mail at shoenbj@wes.army.mil. General information on WES is available on the web site at http://www.wes.army.mil.